

THE ANATOMY OF DESIGN: DOCUMENTING PROCESS

Cara M. Smith



THE ANATOMY OF DESIGN: DOCUMENTING PROCESS

Cara M. Smith

Professor Bob Fisher

thesis studio professor

Professor Lohren Deeg

thesis advisor

Albert John

client & consultant



copyright 2005

ACKNOWLEDGMENTS

Thank you:

Thank you God, for being infinitely more than architecture. Thank you for giving me a passion and a reason to live beyond the means of a profession.

Thank you Mom and Dad for telling me I could be an architect ever since I was a little girl. Thank you for your support and encouragement along the way and always being impressed by my designs whether they were good or not. Thank you for believing in me.

Thank you to Bob, Lohren and Brian for challenging me along in this process and expecting more out of me. Thanks for pushing me toward my potential. It's been a fun year.

Thank you to my amazing friends. Thanks for your love and encouragement during late nights over the years, and for continually reminding me of the real reason that I'm here.

"I came that they might have life, and have it to the full." - Jesus Christ

TABLE OF CONTENTS

INTRODUCTION to define a thesis	4
BACKGROUND evaluating the problem of documentation	6
RESEARCH diving into the process	8
RESULTS a still frame in the motion of design	10
REFLECTION continuing the journey	16
BIBLIOGRAPHY inspiration and information	17

INTRODUCTION

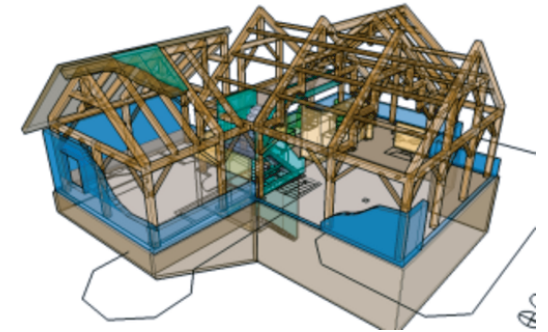
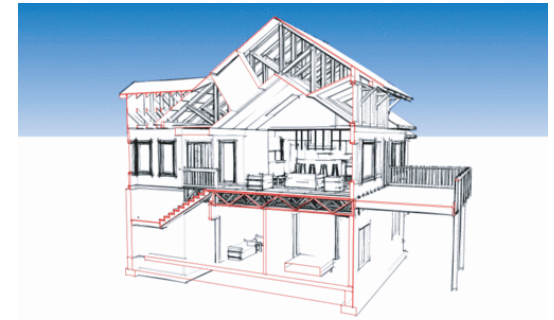
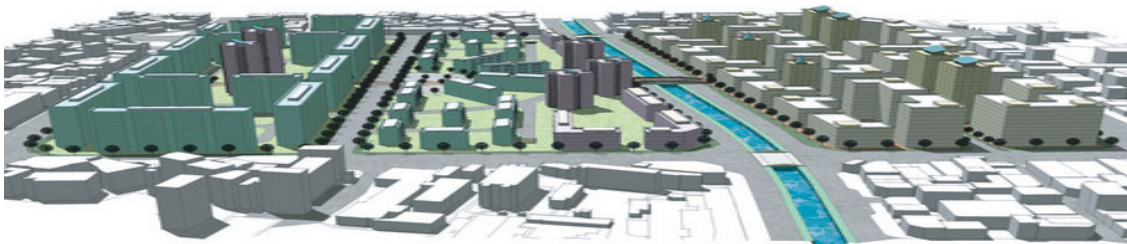
to define a thesis



The problem of documentation of design lies in its format. An architect or a designer's job is to take the words and ideas that a client or a program specifies, and to translate that into a design. This translation is a process of hearing and seeing, then filtering through the designer's mind and finally outputting that process into some visual or verbal medium to communicate that design and process to those involved in critiquing or investing monetarily. A designer, then, works in the confines of this equation:

EXTERNAL INPUT + INTERNAL FILTERS AND IDEOLOGIES = FINAL DESIGN OUTPUT.

But does this process leave something to be desired? Does this equation which represents the process of design fully represent that design which it originally intended to communicate? If design is, in its raw form, an output of a certain undefined 'design process,' couldn't the final design be better represented if that illusive process were better communicated? I believe the answer to these questions is undeniably, **'yes.'**



INTRODUCTION (CONT.)

to define a thesis



This thesis proposes to take this idea of process, and discover how it might be better communicated via film. Film presents a unique opportunity to specifically engage users or viewers within the process of design. This is accomplished by letting them in on the discussions, the decisions, the discrepancies, or the minutiae of design. These decisions and interactions which permeate the design process are all but completely lost during the final presentation of a design. Can they be recaptured? **Can film infuse the final product and communication of design with a depth of character which is normally lost or deeply hidden within even the best of graphic depictions?**

To promote the marriage of the functionality and relevance of film to the architectural design process is what this thesis project sets out to do. If process is truly where design takes place, this exploration of a different way to express that process should prove to manifest the true essence and anatomy of design.



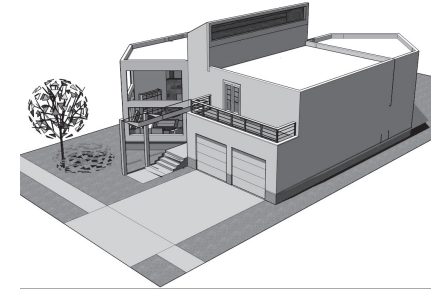
...PROMOTE THE MARRIAGE OF THE FUNCTIONALITY AND REVELANCE OF FILM...
...TO THE ARCHITCTURAL DESIGN PROCESS

BACKGROUND

evaluating the problem of documentation



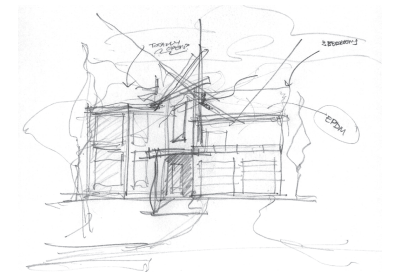
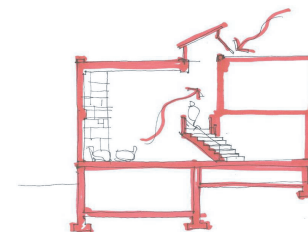
As mentioned earlier, the problem of documentation lies in its format. Content aside, the format has an incredible power to either communicate well or misinform the viewer. The media and means by which the process of design is indicated greatly affects the perceived quality of the final product. If a viewer can engage in the process, then the rationale for the final design becomes more fully communicated.



The architectural community takes great efforts in explaining process in a 2-D format. Other designers do the same. It can be seen through renderings and sketches presented alongside crisp computer-generated images.

The dialogue between the early sketch and the final images is crucial. The journey between a program and a sketch and a model or a set of construction documents is vital, yet often remains without a voice or an adequate way to express itself.

If much of the design is not in the ends, but in the means, how are we representing those means? They remain mute and unseen on a board, and hidden away in notes and emails and memories of discussions. How can we bring those to light?



BACKGROUND (CONT.)

evaluating the problem of documentation

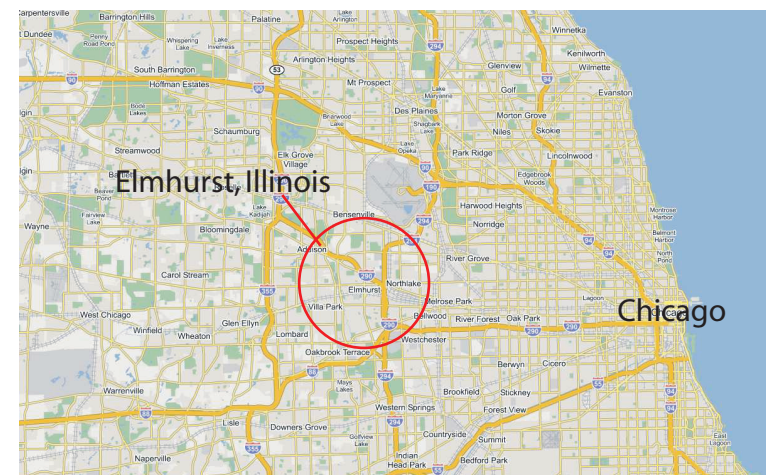
To discover the answer to these questions, the thesis must operate on two levels.

The first level, or the micro-level must exist within the normal parameters of a design project. For this project, I have a client who has requested a house be designed in Elmhurst, Illinois. This will be the case-study for determining whether the media of film can capture the design process and uncover a deeper layer and identity within the final product.

The second level, or the macro-level of the thesis exists in the observation of the documentation and communication of the process. During the process of design I will film discussions and presentations and interactions with both professors, as well as with the client. I will accumulate footage during this process and then at the end of the thesis design process I will filter it into a brief film.

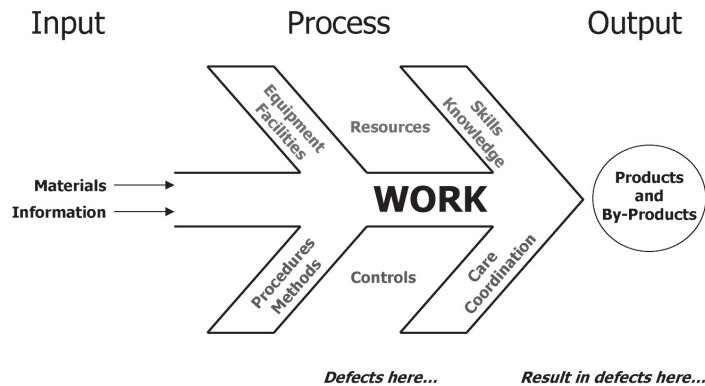
It will be a delicate balance of keeping both of these levels in movement during this process while doing a good job of designing as well as documenting the design.

However, if, at the end of design, I find what I think I am going to find, then it will be worth the effort spent in trying to coordinate the micro and macro levels while maintaining a level of quality for both.



RESEARCH

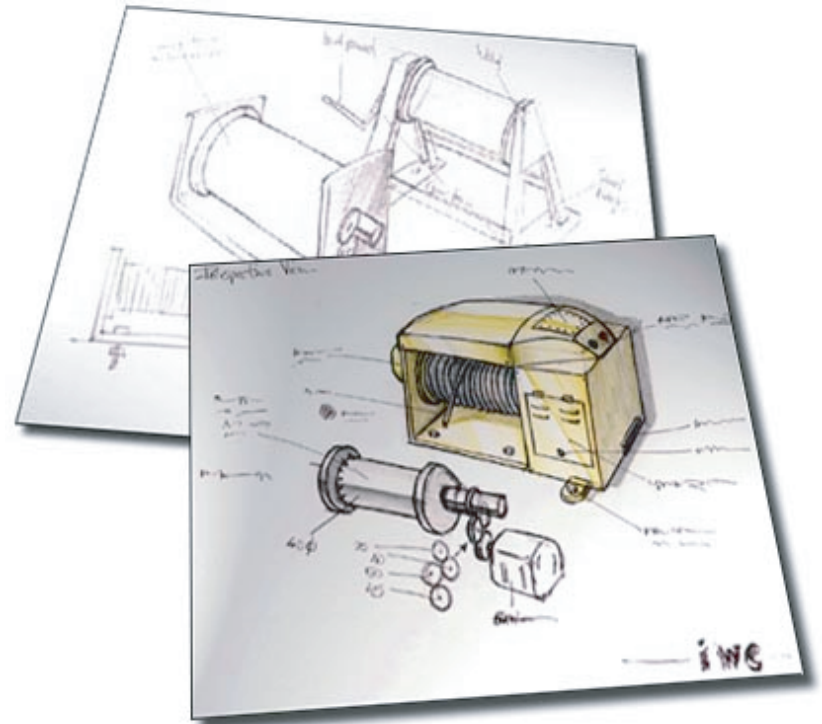
diving into the process



The research required to being implementing this thesis was difficult to pin-down. I looked at many presentations, both of famous architects as well as fellow studio-peers, and discovered the different ways each goes about representing process.

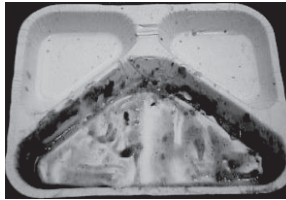
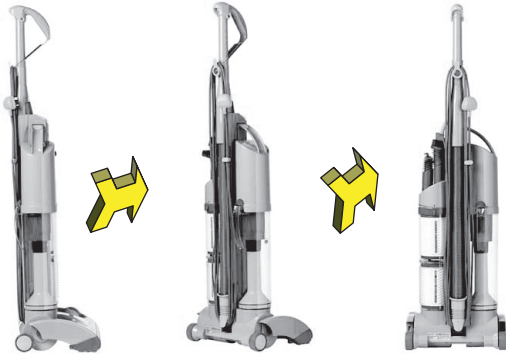
Those that were successful tended to take a very careful and long time communicating process. They directed your eye to specific places of the image at certain times to tell the story of design.

Those that were less than successful expressed process as a last-minute effort to show that, indeed, there was some process involved in the final decisions. What was lacking, however, was the integration of the viewer with those decisions to bring the viewer along in the design process.



RESEARCH (CONT.)

diving into process

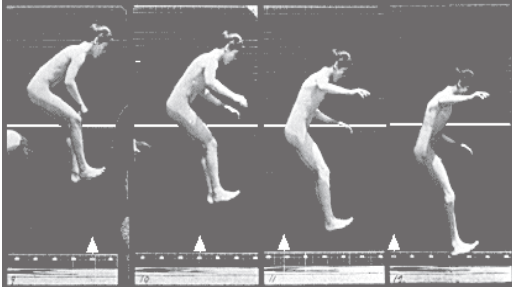


I also discovered, via many different forms of media, that process is very key in the viewer being sold on the product. This is not only true in architecture, but also in any type of product placement. The newest vacuums are sold by explaining the decisions made in making it. The newest low-carb beers or microwave dinners are sold based on the communication of the problem and the process and, finally the product that the company has arrived at as the solution of the problem.

To effectively make a point in any matter, whether design or an argument or a method, one must communicate the process by which he or she arrived there.

RESULTS

a still frame in the motion of design



The house design turned out to be secondary in importance to the design of the communication of process. Included in these pages are images of the final home design, but the DVD which includes the film is where the real results lie.

The program is outlined below, based off of discussions and decisions. It changed periodically throughout the design process.

Program

- space requirements (location/size/quantity)
- o master bedroom - master bath, double sink, shower Jacuzzi tub, walk-in-closet (his & hers) , sitting area 1st floor
- o master bath
- o bedrooms (2nd floor, 3 medium sized bedrooms, another master bath upstairs a mini-master suite, one bath for east bedroom, or other two bedrooms share a bathroom.)
- o entrance (grand entrance... something of a modern look) (trend magazine)
- o entrance porch (rarely used... not really a priority)
- o garage (2 car if I can fit 3)
- o storage
- o kitchen (modern approach, varena cabinetry, poliform cabinetry, stainless steel appliances (5x5 refrigerator, sub-zero appliances, microwave (kitchenade digital touchscreen, dishwasher pullout drawer, (appliances hidden within the cabinets)... island, grilling surface (down draft... pops up next to surface)
- o dining (able to entertain, not formal, usable, 6-8 people 1 table) eating nook concept)
- o outdoor patio
- o closets
- o bathrooms (1/2 bath on first floor), full bathroom upstairs
- o HVAC - 2 furnaces GAS heat.
- o Office - some use in the bedroom, computer
- o Basement/ crawlspace (codes) - office is first priority plus computer (stairs... no riser) finished basement, entertaining/ game area, office setting, natural sky lighting, fire escapes, pool table, card table, tv & couch, kitchenette, full bathroom & (bedroom) (TONS OF GUESTS, lots of entertaining)
- o Living/great room (center of room, family/great room, HUGE to entertain lots of guests, for bible studies 20-30 people 60-70 people crammed, fireplace(s) key more than one is ideal, gas fireplace) custom/ sectional furniture...
- o Laundry room... (from garage... 10x10 (lots of coat storage) lots of shoe storage, iron, washer, dryer
- o Mud room
- o IN India concepts are one large room, 2 acre lot.
- o Wiring in great room (as alternate)



earliest floor plan sketches:

exploring separation between public and private connected by an axis of circulation

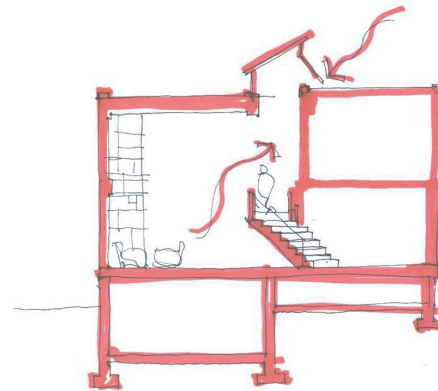


RESULTS (CONT.)

a still image in the motion of design



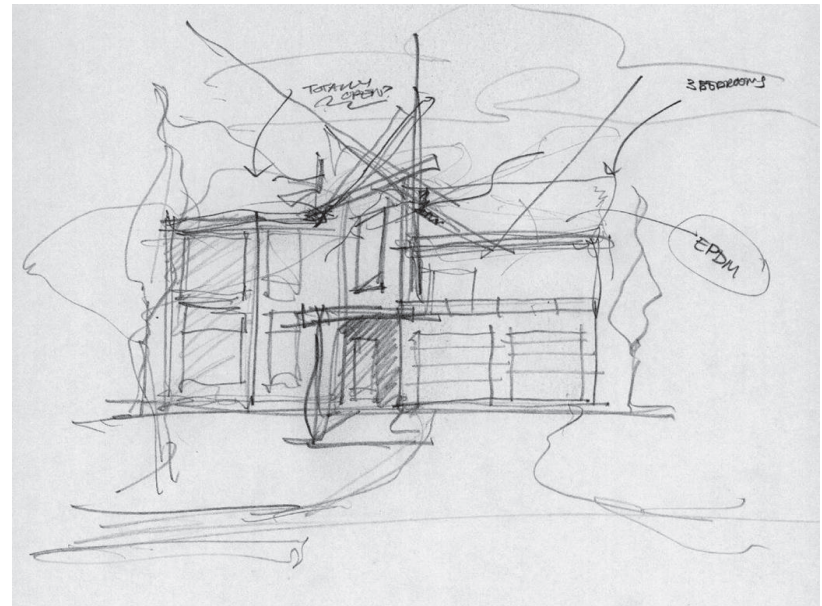
Placing these images on a page serves to accurately contrast the difference between representing process in this format, versus the format contained in the DVD.



section concept:
using stack effect ventilation and
daylighting to maximize efficiency



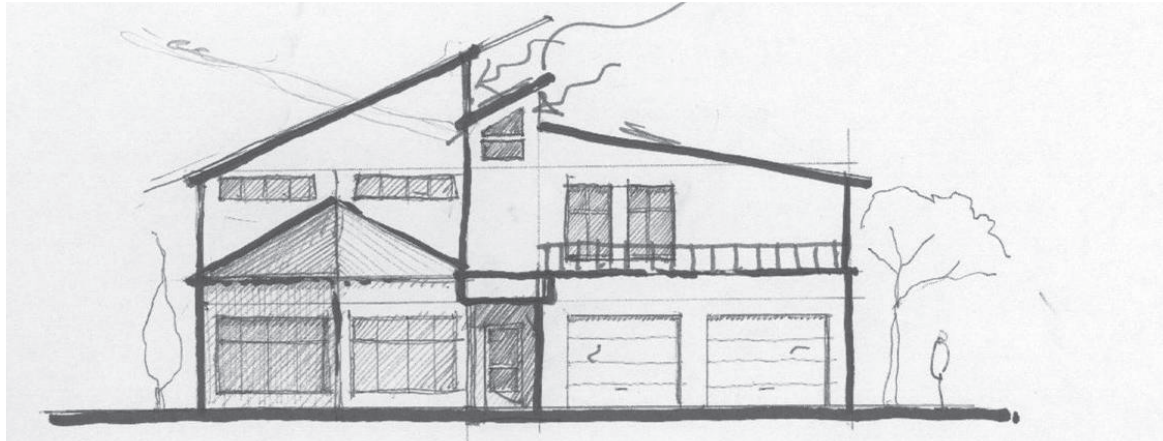
character sketch:
exploring identity, massing, and curb appeal



massing study:
explorations of identity

RESULTS (CONT.)

a still frame in the motion of design



elevation study _a



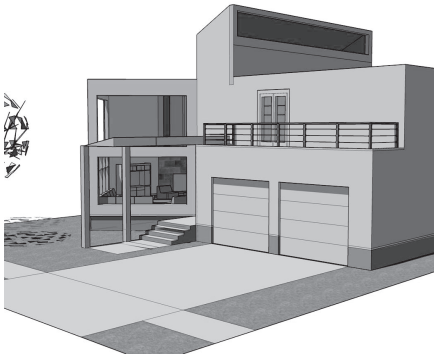
elevation study _b



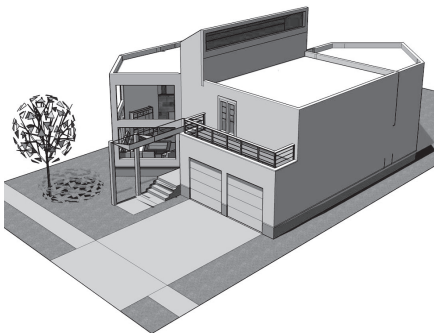
neighborhood context

RESULTS (CONT.)

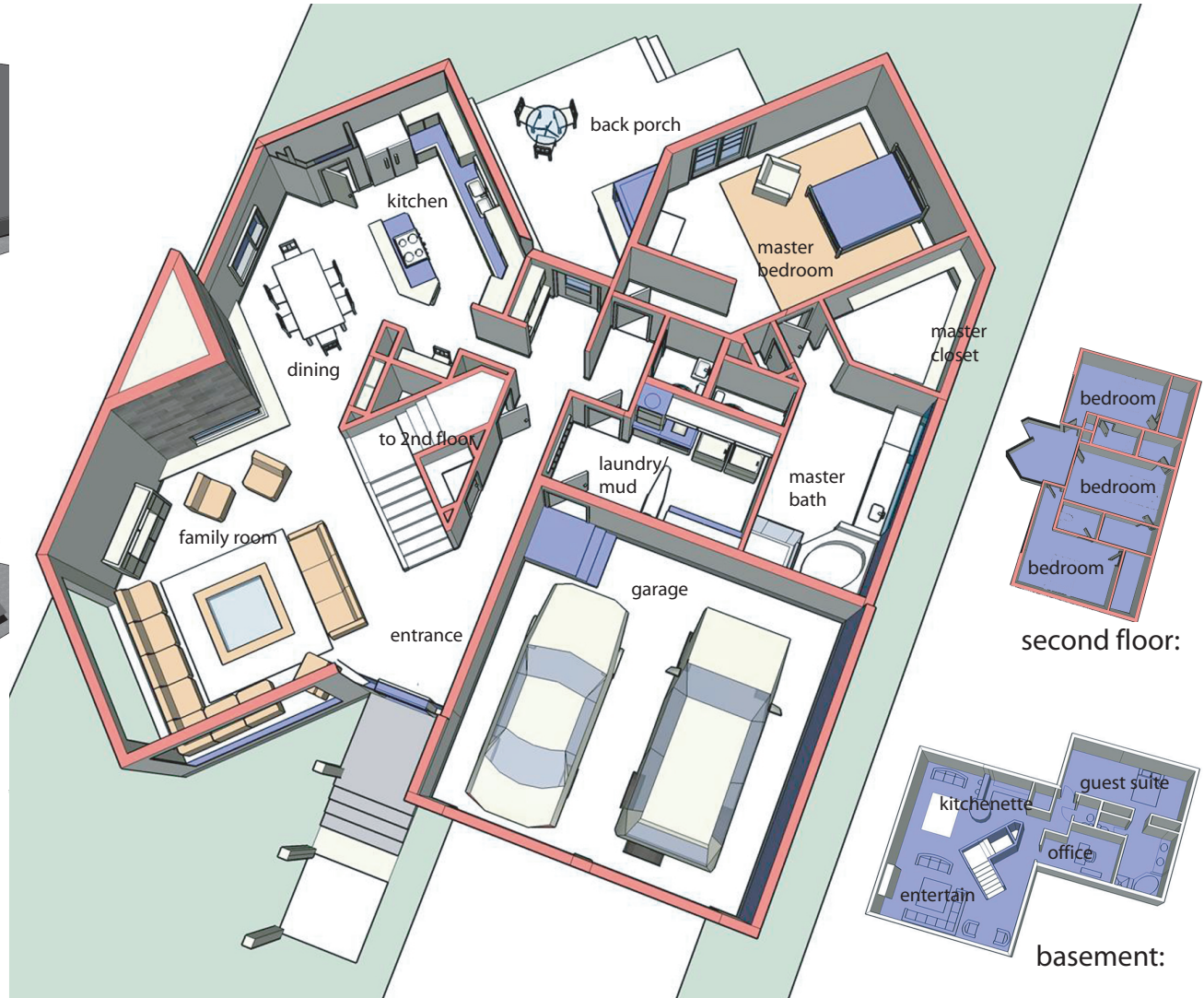
a still image in the motion of design



going for curb appeal:
creating a facade that is both contemporary
and palatable for the neighborhood context



exterior of home:
massing complete, detailing still
in development



first floor plan:
final design at time of thesis completion

RESULTS (CONT.)

a still frame in the motion of design



Directions to view DVD:

This disc contains a data file
which can be viewed from a
computer or laptop.

Insert DVD and enjoy.

REFLECTION

continuing the journey



This thesis proved to be even more exciting than I had intended. Not only did it unlock in my mind new ways to engage users and viewers into the design process, but it also encouraged a new relationship between different areas of expertise within a university campus.

My hope would be that this thesis would inspire in me as well as in the College of Architecture and Planning at Ball State, a greater interest in integrating the different colleges outside our building into the design process. Perhaps projects will integrate different media opportunities that we have outside our building, and even within our own media labs.

The journey of discovering and dissecting the anatomy of process through documenting design has uncovered for me an entirely new set of possibilities in expressing design. Communication of the process of design, not just the final product itself, is increasingly vital in this information age. We are continually bombarded with information and thoughts, so why not use those media to effectively communicate with an audience that often times misses out on the process?

I intend to continue documenting this process as this project goes into construction as much as time will allow, but I also intend to continue to bridge the gap between designer and client, or communicator and viewer. I believe film is a specific tool which has not been used to its greatest potential in the architectural design field. It can specifically direct attention, it can create lasting images, and it gives the designer control over what is communicated. **This emerging discovery is just the beginning of a lifetime of investigations on the power and value of communicating process.**



final elevation scheme a



final elevation scheme b



“this is not the last project of your education, but the first project of the rest of your life.”

BIBLIOGRAPHY

inspiration and information

- Ataman, Osman and Julio Bermúdez. "Media and design process " Association for Computer-Aided design in Architecture (ACADIA) Conference. Salt Lake City, Utah. 1999.
- Booth, Norman K. *Residential landscape architecture : design process for the private residence*. Upper Saddle River, N.J.: Prentice Hall, 2002.
- Brawne, Michael. *Architectural thought : the design process and the expectant eye*. Boston: Elsevier/Architectural Press, 2003.
- Brown, Stephen A. *Communication in the design process*. New York : Spoon Press, 2001.
- Carmona, Matthew. *Housing design quality : through policy, guidance, and review*. New York : Spon Press, 2001.
- Dutton, William H. *Information and communication technologies : visions and realities*. New York : Oxford University Press, 1996.
- Freelimages.co.uk: *provision of stock photography artwork*
- Friedman, Mildred S. *Gehry talks : architecture + process*. New York : St. Martin's Press, c1999.
- Kaplicky, Jan. *Confessions: Principles, architecture, process, life*. Chichester : Wiley-Academy, 2002.
- Koren, David. *Architect's Essentials of Marketing*. Hoboken, N.J. : John Wiley & Sons, 2005.
- Lawson, Bryan. *How designers think : the design process demystified*. Boston : Architectural Press, c1997.



BIBLIOGRAPHY

inspiration and information

Morin, David G. "An alternative method of exercising an Architectural Process" Undergraduate Thesis, Ball State University. 1987.

Nisson, J. D. Ned. *Residential building design & construction workbook*. 2nd ed. Arlington, Mass. : Cutter Information Corp., c1999.

Pickard, Quentin. *The architects' handbook*. Malden, MA : Blackwell Science, 2002.

Preves, Richard. *New house/more house : solving the residential construction project puzzle*. Libertyville, Ill. : Portico Publ., 2001.

Price, Richard W. "Stratford Stage One: the development of an alternative design process." Undergraduate Thesis, Ball State University. 1980.

Quatman, G. William. *The architect's guide to design-build services*. Hoboken, N.J.: John Wiley & Sons, 2003.

Shelton, S. Martin. *Communicating ideas with film, video, and multimedia : a practical guide to information motion-media*. Carbondale : Southern Illinois University Press, c2004.

Wang, Thomas C. *Plan and section drawing*. New York : Van Nostrand Reinhold, 1996.

Willenbrock, Jack H. *Residential building design and construction*. Upper Saddle River, N.J. : Prentice Hall, 1998.

